

ROTOR TYPE SPRINKLER WITH INSERTABLE DRIVE SUBASSEMBLY INCLUDING HORIZONTAL TURBINE AND REVERSING MECHANISM

ABSTRACT OF THE DISCLOSURE

A sprinkler includes an outer housing having a lower end connectable to a source of pressurized water and a riser that is vertically reciprocable within the outer housing between extended and retracted positions when the source of pressurized water is turned ON and OFF. A nozzle is mounted at an upper end of the riser for rotation about a vertical axis. A Pelton turbine is mounted inside the riser for rotation about a horizontal axis, as distinguished from a vertical axis. A drive mechanism connects the turbine to the nozzle so that when the source of pressurized water is turned ON the resulting rotation of the turbine by the pressurized water will rotate the nozzle. The turbine as well as a gear train reduction and a bevel gear reversing mechanism are assembled inside a self-contained clam-shell drive subassembly before being inserted into the riser.